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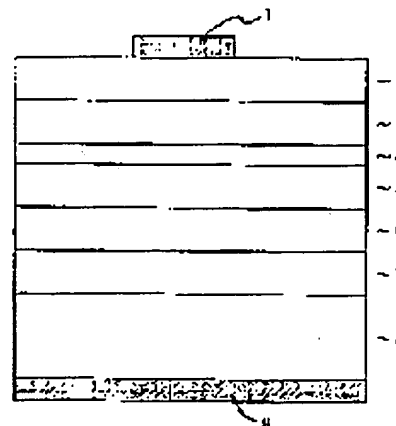(21)Application number : 06-031578   (71)Applicant : SHOWA DENKO KK

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(54) METHOD OF MANUFACTURING EPITAXIAL WAFER

(57)Abstract:
PURPOSE: To manufacture an LED comprising DH structured parts having excellent crystallizability resultantly in high brightness by a method wherein, after growing a buffer layer having the same lattice crystal as that of an active layer on a substrate, the buffer layer surface is polished and then the active layer is to be epitaxially grown again.
CONSTITUTION: Firstly, a GaP buffer layer 7 is crystal grown at 730°C to be n type doped with Se as a dopant. Successively, a GaInP the first stage lower clad layer 6 in the same composition as that of the lower clad layer 5 of the DH structured parts is grown to be doped with Se as the dopant in the same degree as that of the GaP buffer layer 7. At this time, the crystal growing step in the first stage is stopped to pick up a wafer to be polished by ordinary polishing machine for a GaAs substrate and then the DH structured parts are crystal grown by MOVPE device. Through these procedures, an LED comprising DH structured parts having excellent crystallizability resultantly in high brightness can be manufactured.

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